First Trimester Bleeding

Christina DeAngelis, MD
Major, USAF, MC
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First Trimester Bleeding

- Defined as bleeding from the last menstrual period through 13 weeks gestation
- Occurs in 20- 25% of all pregnant women
- Differential diagnosis:
  - Implantation bleeding, anatomic etiologies, infectious etiologies, abnormal pregnancy or abnormal placentation

Implantation Bleeding

- Very common
- Minimal bleeding and short duration at the time of the first missed menstrual period
- May be seen on exam as a brownish-tinged cervical discharge or be of a flow similar to menstrual flow

Anatomic Etiologies

- Cervical lesions such as polyps on the external cervical os can result in bleeding
  - Often bleeding occurs after intercourse
    - submucosal leiomyomas may grow in the first trimester due to estrogen stimulation and cause subchorionic bleeding

Anatomic Etiologies

- Lacerations of labia, vagina, cervix can result in bleeding
- Vaginal varicosity can rupture and result in bleeding
- Speculum exam important to evaluate for laceration and source of vaginal bleeding

Infectious Etiologies

- Cervicitis common source of bleeding as a result of a vaginal or cervical infection
- On exam the cervix appears friable and an abnormal vaginal discharge may be present
  - Q-tip used to collect specimen will often start bleeding on the cervical portio

Infectious Etiologies

- GC/Chl probe should be collected from cervical os
- Wet prep should be done along with testing the fluid with nitrazine paper
  - Clue cells and pH>4.5 suggests bacterial vaginosis infection
  - Trichomonads and pH>4.5 diagnostic of trichomonas infection
  - Hyphae or budding yeast and pH<4.5 suggests yeast vaginitis

Abnormal Pregnancy

- Spontaneous miscarriage
  - Bleeding in the first trimester can indicate a threatened abortion, incomplete abortion, complete abortion or missed abortion

Threatened Abortion

- Diagnosed when bleeding is seen from the cervical os and the os is closed
  - Becomes an inevitable abortion when the cervix dilates and products of conception pass through the os

Incomplete Abortion

- Part of the products of conception have been expelled but some remain in the uterus
- Bleeding can be heavy and patient has cramping
- If abortion occurs prior to 7 weeks gestation, usually the process will complete itself without requiring surgical intervention

Complete Abortion

- Diagnosed when the uterus has expelled all contents and the internal os is closed and bleeding minimal
  - Uterus returns to near normal size and patient does not have much cramping

Missed Abortion

- Results when the embryo stops developing but hasn’t been expelled from the uterus
  - Uterus is smaller than expected by dates and bleeding may be brown or dark red and is minimal

Ectopic Pregnancy

- Incidence of about 1%
- Defined as pregnancy implanted outside of endometrial cavity
  - May be in the cervix, fallopian tube, on the ovary or in the abdominal cavity
  - Bleeding occurs in 90% of early unruptured ectopics and patient usually has pain associated with bleeding
  - Bleeding results from separation of the decidua from the endometrium as the ectopic dies or directly from site of ectopic pregnancy

Ectopic Pregnancy

- If rupture occurs, hemorrhage may be severe and patient may become hypovolemic
- Adnexal mass may be seen on ultrasound if ectopic is in the tube or on the ovary but may be confused with a corpus luteal cyst in a normal gestation

Ectopic Pregnancy

- Tubal rupture is rare with HCG levels <100 unless pregnancy is in area of tube other than the ampulla
- Risk factors for ectopic include: prior history of ectopic, prior tubal procedure such as tubal ligation or tubal reanastamosis, presence of IUD when patient conceives, history of PID

Molar Gestation

- Incidence is 1 in 1000 gestations
- Classically presents as vaginal bleeding and uterus enlarged beyond expected size
- May have passage of grapelike structures from vagina
- May present with HTN, edema and proteinuria and will often have HCG levels>100,000

Vanishing Twin

- May present with dark red or brown bleeding
- Ultrasound reveals one normal gestational sac and a second irregular gestational sac with no fetal pole or a fetal pole with no cardiac activity
- Will be spontaneously resorbed

Abnormal Placentation

- 20% of placentas are previas or low lying at 13-15 weeks on ultrasound
  - Only 5 % at term remain as previas
  - If previa diagnosed, pelvic rest recommended until repeat ultrasound confirms resolution of previa

Diagnostic Studies for First Trimester Bleeding

- Laboratory workup should include:
  - Blood type and screen, CBC, quantitative HCG, cervical cultures, vaginal cultures and consider a progesterone level
    - If Rh-, patient needs rhogam
    - In normal gestation, the quantitative HCG should increase by at least 65% every 48 hours
      - In 10 % of normal gestation the rise may be less than 65% and if labs are done in different facilities the calibration may be different

Progesterone Levels

- A single progesterone measurement has a 88% sensitivity and specificity in predicting a live vs. dead uterine pregnancy or a tubal pregnancy
  - Only 1% of abnormal pregnancies have a progesterone level >25ng/ml
  - Value <5ng/ml indicates a dead conceptus but doesn't indicate if pregnancy is in uterus or an ectopic

Management of First Trimester Bleeding

- Take history and perform physical exam
- Obtain lab studies as indicated
- Order transvaginal ultrasound
  - With transvaginal ultrasound and a HCG level>1800 a gestational sac should be visualized in the uterus if there is an intrauterine pregnancy
  - With abdominal ultrasound, HCG>6000 gestational sac able to be seen
  - Ideally want to identify yolk sac inside of gestational sac(double ring sign to rule out ectopic pregnancy)

Patient Counseling and Education

- A single HCG value often does not provide enough information to be able to diagnose the status of the gestation
  - Need to rely on serial HCG measurements in conjunction with ultrasound study to eval gestation
  - HCG only rises every 48 hours up to 8-9 weeks
  - After 7 weeks gestation, ultrasound can be relied upon solely to eval if a viable IUP present so long as the patient is definitely at least 7 weeks from LMP

Patient Education

- If infection present, need to inform and treat patient and possibly partner
- Patients at risk for ectopics need close surveillance and strict precautions
- Patients diagnosed with miscarriage benefit from extensive counseling
  - May offer expectant management vs. D&C&E once diagnosis is made
  - Should counsel as to risk of miscarriage of 20% in all pregnant women and risk of repeat miscarriage not increased so long as no history of repetitive SAB's or underlying health problems which can cause SAB

Patient Education

- Should offer grief counseling for SAB such as Resolve Through Sharing Program
  - Phone numbers to contact are 7-8031 or 7-0690

Reassure patient that once viable IUP is diagnosed by ultrasound, the risk of miscarriage is less than 3%!